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101ST CONGRESS
1st Session

SENATE

REPORT
101-201

LEADVILLE MINE DRAINAGE TREATMENT ACT OF 1989

NOVEMBER 13 (legislative day, NOVEMBER 6), 1989.—Ordered to be printed

Mr. JOHNSTON, from the Committee on Energy and Natural Resources, submitted the following

REPORT

[To accompany S. 1275]

The Committee on Energy and Natural Resources, to which was referred the bill (S. 1275) to authorize the Secretary of the Interior to construct, operate, and maintain a water treatment plant for the purpose of treating water discharged from the Leadville Mine Drainage Tunnel near Leadville, CO, in order to meet water quality standards, and for other purposes, having considered the same, reports favorably thereon without amendment and recommends that the bill do pass.

PURPOSE OF THE MEASURE

The purpose of S. 1275 is to authorize the Secretary of the Interior to construct and operate a facility to remove naturally occuring contaminants from water discharged into the Arkansas River near Leadville, Colorado, by the Leadville Mine Drainage Tunnel, a facility owned by the Bureau of Reclamation.

BACKGROUND AND NEED

The Leadville Tunnel, constructed by the U.S. Bureau of Mines in 1944, drains groundwater for mines in the Leadville, Colorado, area into the East Fork of the Arkansas River. The Bureau of Reclamation obtained the tunnel from the Bureau of Mines in 1959, intending to use the water for a reclamation project. The Bureau of Reclamation was unable to secure a State right to the water.

In the early 1970's, it was determined that water draining from the tunnel was contaminated by a number of heavy metals, all defined as pollutants under the Clean Water Act (CWA). The polluted drainage water has damaged the Arkansas River fishery and sub-

S313-43

stantially impaired the river's water quality. In 1975, the Bureau of Reclamation was issued a permit by the Environmental Protection Agency limiting allowable pollutant discharges. To bring tunnel discharges into compliance with the permit, the Bureau undertook investigations of various treatment methods. Those investigations indicated that the most effective approach would be the treatment plant combined with tunnel lining. In February 1989, the Bureau and Environmental Protection Agency entered into an agreement whereby the Bureau committed to construct and operate a water treatment plant capable of achieving the effluent limitations. S. 1275 would permit implementation of that agreement and, ultimately, improvement of Arkansas River water quality.

There are numerous other sources of mine-caused water pollution in the Leadville area. One, the Yak Tunnel (owned by ASARCO), is a Superfund site. At the time the Bureau studied options for cleaning and Leadville Tunnel drainage, it also reviewed options for treating both Leadville and Yak Tunnel drainage. That approach was determined to be not cost-effective.

The Committee notes that, in fiscal year 1990, the Bureau of Reclamation will conduct studies related to mine water treatment and related problems in the greater Leadville, Colorado, area, including technical oversight and support. The Committee on Energy and Natural Resources supports these studies as appropriate to the new mission of the Bureau of Reclamation. The Committee emphasizes its understanding that these studies shall in no manner interfere with or slow the progress of any mine drainage control or treatment efforts underway or planned for the greater Leadville, Colorado, area. The Committee expects that the Bureau of Reclamation will consult with the Environmental Protection Agency to ensure that Bureau studies do not adversely impact the pace or substance of remedial efforts associated with the Yak Tunnel.

LEGISLATIVE HISTORY

S. 1275 was introduced by Senator Wirth on June 23, 1989. The Subcommittee on Water and held a hearing on S. 1275 on September 14, 1989. A similar measure has been reported by the House Committee on Interior and Insular Affairs as a provison of H.R. 2567.

At the business meeting on November 1, 1989, the Senate Committee on Energy and Natural Resources ordered S. 1275 favorably reported.

COMMITTEE RECOMMENDATIONS AND TABULATION OF VOTES

The Senate Committee on Energy and Natural Resources, in open business session on November 1, 1989, by a unanimous vote of a quorum present recommends that the Senate pass S. 1275 as described herein.

The rollcall vote on reporting the measure was 18 yeas, 0 nays, as follows:

YEAS	NAYS
Mr. Johnston	
Mr. Bumpers	
Mr. Ford	

Mr. Metzenbaum*
Mr. Bradley
Mr. Bingaman*
Mr. Wirth
Mr. Conrad
Mr. Heflin
Mr. McClure
Mr. Hatfield
Mr. Domenici*
Mr. Wallop*
Mr. Murkowski
Mr. Nickles*
Mr. Burns
Mr. Garn*
Mr. McConnell

*Indicates voted by proxy.

SECTION-BY-SECTION ANALYSIS

Section 101 authorizes the Secretary of the Interior to construct, operate and maintain a water treatment plant and dispose of its sludge. This section also authorizes the Secretary to line with concrete a portion of the Leadville Mine Drainage Tunnel.

Section 102 provides that all costs will be non-reimbursable.

Section 103 provides that the Secretary of the Interior will be responsible for operation and maintenance of the water treatment plant, but may contract for those services.

Section 104 authorizes appropriation of $10.7 million (October 1988 price levels) for construction of the treatment plant and tunnel lining and sludge disposal, plus such sums as may be necessary for operation and maintenance of the plant and tunnel lining.

Section 105 limits the size of the treatment plant to that required to treat the quantity and quality of effluent historically discharged from the Leadville Mine Drainage Tunnel.

COST AND BUDGETARY CONSIDERATIONS

The following estimate of the cost of this measure has been provided by the Congressional Budget Office:

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, DC, November 9, 1989.

Hon. J. BENNETT JOHNSTON, Jr.,
Chairman, Committee on Energy and Natural Resources, U.S. Senate, Washington, DC.

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the attached cost estimate for S. 1275, the Leadville Mine Drainage Treatment Act of 1989.

If you wish further details on this estimate, we will be pleased to provide them.

Sincerely,

ROBERT D. REISCHAUER,
Director.

CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

1. Bill number: S. 1275.

2. Bill title: The Leadville Mine Drainage Treatment Act of 1989.

3. Bill status: As ordered reported by the Senate Committee on Energy and Natural Resources on November 1, 1989.

4. Bill purpose: S. 1275 would authorize the Bureau of Reclamation (BOR) to construct a wastewater treatment plant and to install a concrete liner to address water quality problems at the Leadville Mine Drainage Tunnel in Colorado. The bill would authorize the appropriation of $10.7 million plus adjustments for inflation and whatever sums are necessary for operation and maintenance of the treatment plant.

5. Estimated cost to the Federal Government:

[By fiscal year, in millions of dollars]

	1990	1991	1992	1993	1994
Estimated authorization level	2.0	4.5	5.5	0.5	0.5
Estimated outlays	1.6	4.0	5.3	1.5	0.5

The costs of this bill fall within budget function 300.

Basis of estimate: Based on information from BOR, CBO estimates that construction of the treatment plant would cost about $12 million over the next years, which would fall within the bill's authorization. We assume that the bill would be enacted early in fiscal year 1990 and that appropriations would be provided beginning that year. Outlays are estimated based on information from BOR and on historical spending patterns for similar projects. Operation and maintenance costs are estimated to total about $500,000 annually beginning the year construction is complete, probably 1933.

6. Estimated costs to State and local governments: None.

7. Estimate comparison: None.

8. Previous CBO estimate: On November 8, 1989, CBO prepared a cost estimate for H.R. 2567, the Reclamation Projects Authorization and Adjustment Act of 1989, as ordered reported by the House Committee on Interior and Insular Affairs on November 1, 1989. The cost estimate for Title II of H.R. 2567 was identical to this estimate.

9. Estimate prepared by: Theresa Gullo.

10. Estimate approved by: C.G. Nuckols for James L. Blum, Assistant Director for Budget Analysis.

REGULATORY IMPACT EVALUATION

In compliance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee makes the following evaluation of the regulatory impact which would be incurred in carrying out S. 1275. The bill is not a regulatory measure in the sense of imposing Government-established standards or significant economic responsibilities on private individuals and businesses.

No personal information would be collected in administering the program. Therefore, there would be no impact of personnel privacy.

Little, if any, additional paperwork would result from the enactment of S. 1275, as reported.

EXECUTIVE COMMUNICATIONS

On July 17, 1989, the Committee on Energy and Natural Resources requested legislative reports from the Environmental Protection Agency and the Office of Management and Budget setting forth executive views on S. 1275. These reports had not been received at the time the report on S. 1275 was filed. When the reports become available, the chairman will request that they be printed in the Congressional Record for the advice of the Senate. The testimony provided by the Environmental Protection Agency and the Bureau of Reclamation at the Subcommittee hearing follows:

STATEMENT OF MAX H. DODSON, DIRECTOR, WATER MANAGEMENT DIVISION, REGION VIII, U.S. ENVIRONMENTAL PROTECTION AGENCY

Thank you for this opportunity for EPA to submit testimony on the U.S. Bureau of Reclamation's water treatment facility at the Leadville Drainage Tunnel in Colorado as described in S. 1275.

EPA and its predecessor agencies have been aware of the pollution of the Arkansas River in Colorado from past and present mining activities for decades. For the past 15 years, EPA has worked with the Bureau of Reclamation, Colorado Department of Health, and others to identify and develop solutions to the different sources of toxic heavy metals in the drainage. We are convinced that the construction of a water treatment plant at the Leadville Drainage Tunnel will put an end to over 40 years of toxic discharges into the Arkansas River from this major source of toxicity. This cleanup will be one of many in the Upper Arkansas drainage which are expected to return major portions of it to the "Gold Medal" fishery designation it once had in earlier years.

EPA and the Bureau entered into a Federal Facility Compliance Agreement in February of this year to implement the above corrective actions. The Agreement set forth treatment design criteria which address both general (whole effluent) toxicity and chemically measured toxicity, and provided the following compliance schedule for the construction of a water treatment facility to meet these criteria:

1. Complete design and preparation of treatment plant specifications by August 1, 1989.
2. Commence construction of treatment plant by May 1, 1990.
3. Complete construction of major treatment units by September 1, 1991.
4. Attain operational status of all major treatment units by June 1, 1992.

The Tunnel was constructed during World War II and the Korean War to drain the underground mine workings in the Leadville area. The Bureau obtained title to the Tunnel from the U.S. Bureau of Mines with the intent of using the water as part of the Fryingpan-Arkansas Water Project.

The drainage from the Tunnel contains elevated levels of toxic metals, chiefly cadmium, zinc, and iron, and has exceeded the limits of its NPDES Discharge Permit since 1977. EPA and Bureau studies have shown that the Tunnel's discharge has an adverse impact on the biota of the Arkansas River. The Tunnel contributes to the poor water quality of the Upper Arkansas River, and EPA has identified the Tunnel as a source of toxic pollutants pursuant to section 304(l) of the Clean Water Act.

The Tunnel is the subject of a January 13, 1989 citizen suit filed against the Bureau by the Sierra Club and the Colorado Environmental Coalition for past violations of its NPDES discharge permit.

The Leadville Drainage Tunnel should not be confused with the adjacent California Gulch—Yak Tunnel is one of Colorado's fourteen "Superfund" sites and another large contributor of toxic contamination to the upper Arkansas River. Part of the separate cleanup plan for the Yak is now underway. Last November, a "surge pond" was built near the month of the Yak Tunnel designed to prevent surges of acid mine drainage into the Arkansas River such as occurred in 1983 and 1985.

The Bureau has been studying the Leadville Drainage Tunnel problem since 1978 and has already undertaken some steps to improve the quality of the Tunnel discharge. In 1988, the Bureau conducted a pilot plant study to test the feasibility of the treatment scheme for the Tunnel and has since begun design of a full scale facility to meet permit and water quality standards. The Bureau expects to complete design and preparation of plans and specifications very soon, and construction is scheduled to begin in May 1990.

Once operational, the plant will have to meet strict effluent limits. Plant operators will perform periodic monitoring of the effluent and the receiving stream and report the result to EPA and the Colorado Department of Health. The permit limits for zinc, copper, lead, cadmium, silver, general whole effluent toxicity, and pH will be set at levels to protect cold-water stream aquatic life.

The Bureau has taken the position that it must obtain Congressional authorization and funding for this badly needed project and is attempting to do so in this Congressional session with bill S. 1275. The Bureau estimates they will need about 10 million dollars to complete the project.

EPA supports this project to improve the water quality of the Arkansas River and believes that the project is long overdue. This project, along with others in the Upper Arkansas River Basin, are necessary to improve the fishery in the River. We urge that the provisions of S. 1275 dealing with the financing of the proejct be favorably received by the Subcommittee.

STATEMENT OF JOE HALL, ACTING COMMISSIONER, BUREAU OF RECLAMATION, DEPARTMENT OF THE INTERIOR

Mr. Chairman, I am here today to testify in support of S. 1275 a bill "to authorize the Secretary of the Interior to construct, operate, and maintain a water treatment plan for the purpose of treating water discharged from the Leadville Mine Drainage Tunnel

near Leadville, Colorado, in order to meet water quality standards, and for other purposes."

Leadville Mine Drainage Tunnel is located near the small mining community of Leadville in west-central Colorado. The tunnel was constructed by the Bureau of Mines during World War II for draining water emanating from the mining of strategic metals needed for the war effort. The Bureau of Reclamation accepted custody of the tunnel in 1959 with the intent of using tunnel discharges for Fryingpan-Arkansas Project purposes. Reclamation was unsuccessful, however, in obtaining rights to the water discharged from the tunnel.

The tunnel is 2.1 miles long and discharges approximately 4 cubic feet per second directly into the East Fork of the Arkansas River.

In March 1975 the Environmental Protection Agency, pursuant to the Clean Water Act, issued a National Pollution Discharge Elimination System (NPDES) permit for the tunnel because tunnel effluent is contaminated with heavy metals, e.g. cadmium, lead, and zinc, which exceed applicable limitations. The permit authorizes a discharge from the tunnel as long as certain effluent limitations are met. Reclamation has consistently been in noncompliance with the NPDES permit since it was issued.

Pursuant to the authorization in the Reclamation Authorization Act of 1976 (90 Stat. 1324, 1329), Reclamation initiated a series of investigations directed at identifying corrective measures which would bring tunnel effluent into compliance with the NPDES permit. Completion of these studies, which included groundwater hydrology, impacts of plugging the tunnel, various alternative methods for treating the discharges, and construction and operation of a pilot treatment plant has provided Reclamation with a sound basis for deciding that construction of a water treatment plant and concrete lining of a portion of the tunnel are the most effective means of achieving EPA mandated water quality standards. In February 1989 Reclamation and EPA entered into a compliance agreement which includes a schedule that shows onsite construction beginning by May 1990.

Section 101 of S. 1275 authorizes the Secretary of the Interior to construct, operate, maintain a water treatment plant, including disposal of sludge produced by the treatment plant, and to install concrete lining on the portion of the Leadville Mine Drainage Tunnel needing rehabilitation.

Section 102 directs that costs associated with construction, operation, maintenance of the treatment facility be borne by the Federal Government. We believe this is appropriate since the tunnel was constructed to benefit the Nation and the contaminated effluent results from this construction. In addition, the Department of the Interior has obtained royalty agreements from about 80 percent of the known mine owners whose mines were benefited by drainage through the tunnel.

As a result of these agreements, the United States has received in payments a total of $779.12 which was paid by the Cadwell Mining Company prior to 1960. No efforts at further collections have been made because no mining is taking place in the mines covered by the agreements. We do not believe that additional ef-

forts to collect from private sources would be successful. It is this condition that caused the Department of the Interior to not seek cost sharing of the treatment plant by the mine owners. Section 103 places responsibility for operation and maintenance of the water treatment plant with the Secretary of the Interior and provides for contracting for those services.

As a result, Section 104 authorizes to be appropriated $10.7 million (October 1988 price levels) beginning October 1, 1989, to accomplish the work described in Sections 101 through 105.

Section 105 specifies that the treatment plant authorized by S. 1275 shall be designed and constructed to treat the quantity and quality of effluent historically discharged from the Leadville Mine Drainage Tunnel.

I appreciate the opportunity to offer this statement. If there are any questions, I will be pleased to respond to them at this time.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, the Committee notes that no changes in existing law are made by the bill S. 1275, as reported.

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